Mobile Communications

Volker Wirsdorf/Sabrina Rigo
U.S. Commercial Service Germany
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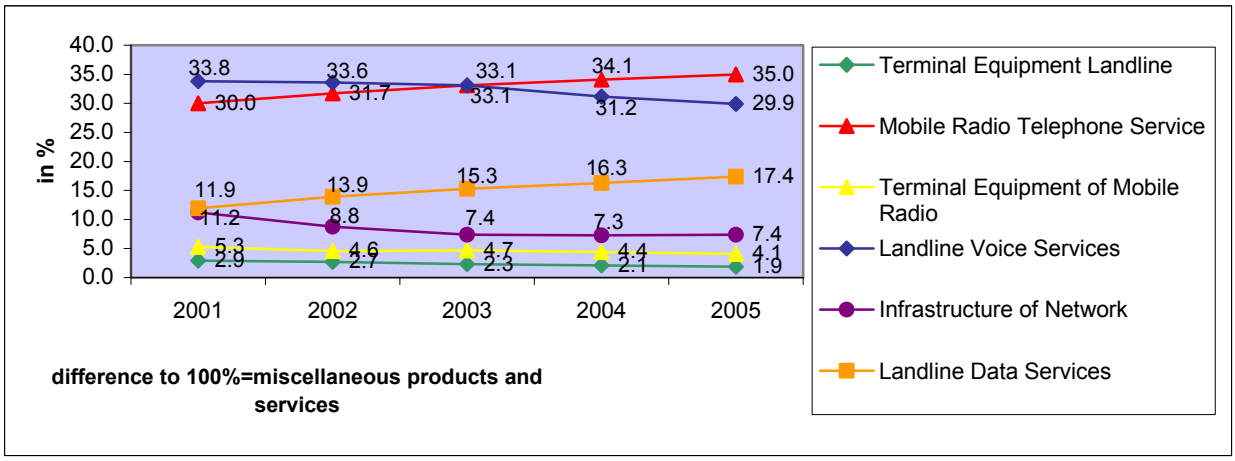
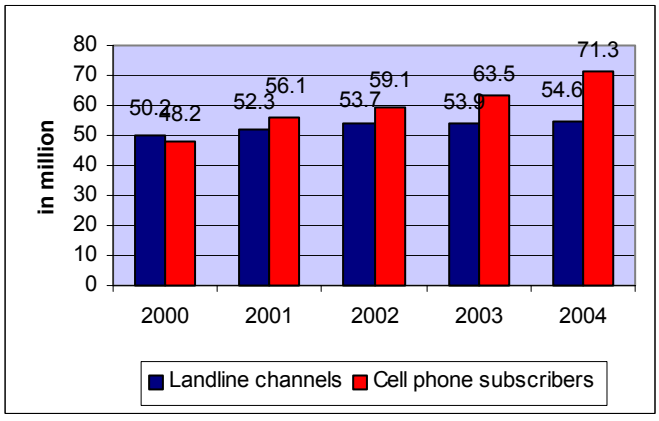
Summary
Contrary to most other economic areas in Germany, the market for telecommunications equipment and services has seen steady growth during the past few years. The German ICT association, BITKOM, estimates that this market reached EUR 64.9 billion in 2004.
As sales in the fixed-line segment were decreasing - with the exception of data communication - this growth can be attributed to positive developments in the mobile sector, where both, the number of subscribers as well as average sales per customer increased.

Chart 1: Market for telecommunication by segments



Source: "Monitoring Informationswirtschaft", 7. Faktenbericht 2004

Chart 2: Fixed-line channels and cellphone subscribers



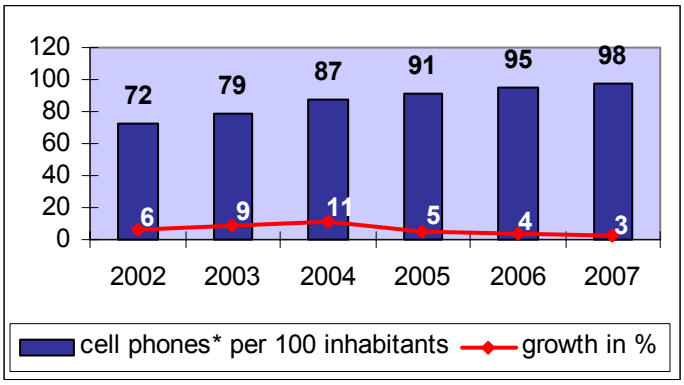
Source: "Monitoring Informationswirtschaft", 7. Faktenbericht 2004 and www.bundesnetzagentur.de

According to the German FCC equivalent, "Bundesnetzagentur," (formerly RegTP), the number of subscribers to the German mobile networks increased to 71.3 million in 2004. For 2005, experts forecast that Germany will have reached a penetration rate of more than 80%, which indicates that the German mobile telephony segment is heading towards saturation. As growth rates are slowing down, service providers and terminal equipment manufacturers are competing aggressively to win new subscribers. Companies focus on the provision of cell phone services such as ring tones, games, background pictures and video clips. In 2004, ring tones alone are estimated to have reached sales of EUR 183 million. UMTS is still regarded by many as too expensive, and adequate UMTS services and handsets that would appeal to consumers have not been introduced to the market in large volumes.

A. Market Overview

In 2006, Germans will presumably spend about EUR 25 billion on cell phone services, whereas sales in the fixed-line services segment is expected to decrease to EUR 19.5 billion. Statistically, more than 80 of 100 Germans have had a cell phone contract in 2004, which corresponds to a growth of approximately 11% compared with 2003. However, until 2007, growth rates are expected to slow down to between 3 and 5 percent annually. Most cell phones still operate in the 900 and 1,800 Mhz GSM bands.

Chart 3: Cell phones in Germany

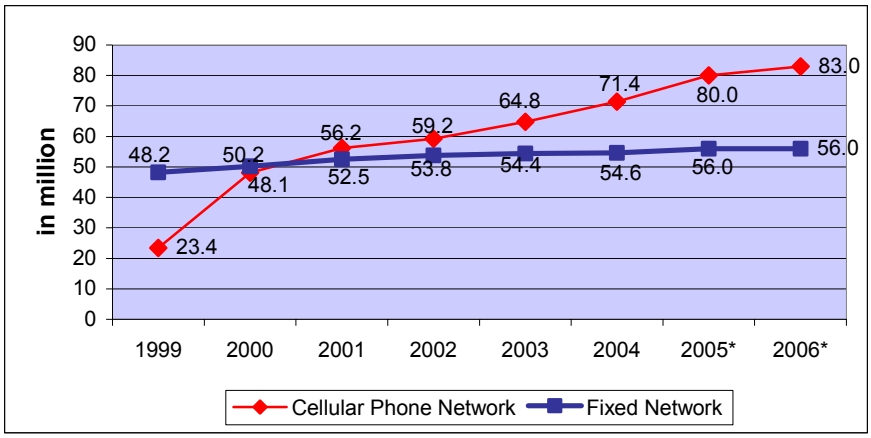


Source: "Daten zur Informationsgesellschaft", BITKOM, Edition 2005

The Bundesnetzagentur estimates that mobile communications sales (excluding carrier-to-carrier business) reached EUR 22.1 billion in 2004.

Developments in the services area will also affect equipment suppliers. In 2006, annual sales of mobile communications equipment will reach EUR 3.6 billion, whereas terminal equipment for fixed-line telephony will come to EUR 600 million only.

Chart 4: Development of fixed-line- and cellular phone network subscribers



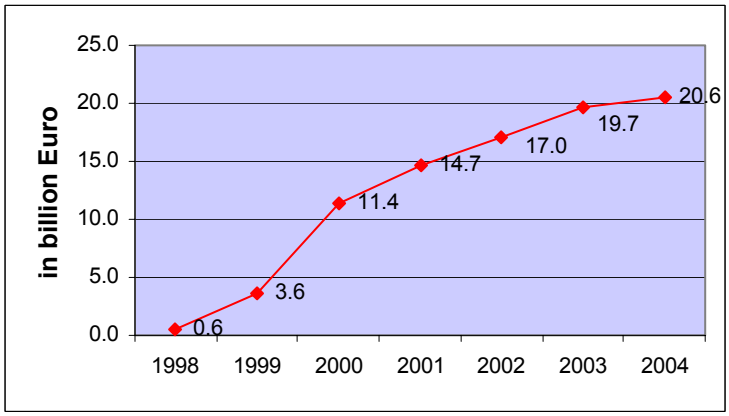
Source: "Basiszahlen Telekommunikation", Motor-Presse Stuttgart
* projected

B. Market Highlights –Trends

B.1 SMS/MMS

The mobile sector does not suffer from a lack of innovations. Some segments or services, however, such as UMTS, are still in their infancy as far as market introduction is concerned – because of both a lack of suitable terminal equipment and applications that would appeal to consumers. Others services such as Short Messaging Services have taken off extremely well: Messaging services are among the most popular and profitable of those services and 74.8 % of all mobile telephony subscribers use their cell phone on a regular basis to send short messages. Consequently, the number of short messages has been rising steadily and has reached a level of 20.6 billion in 2004.

Chart 5: Number of sent short messages in Germany



Source: "Telecom Handel", Neue Mediengesellschaft Ulm mbH

B. 2 UMTS

Mobile communications and mobile Internet applications are seen as growth drivers of the telecommunication industry. UMTS, however, is still in its infancy: Because of the late market introduction, Germany currently only has approximately 0.25 million UMTS users (16.1 million users worldwide). Nevertheless, UMTS cell phones were for the first time on top of preference listings of customers looking at purchases of cell phones.

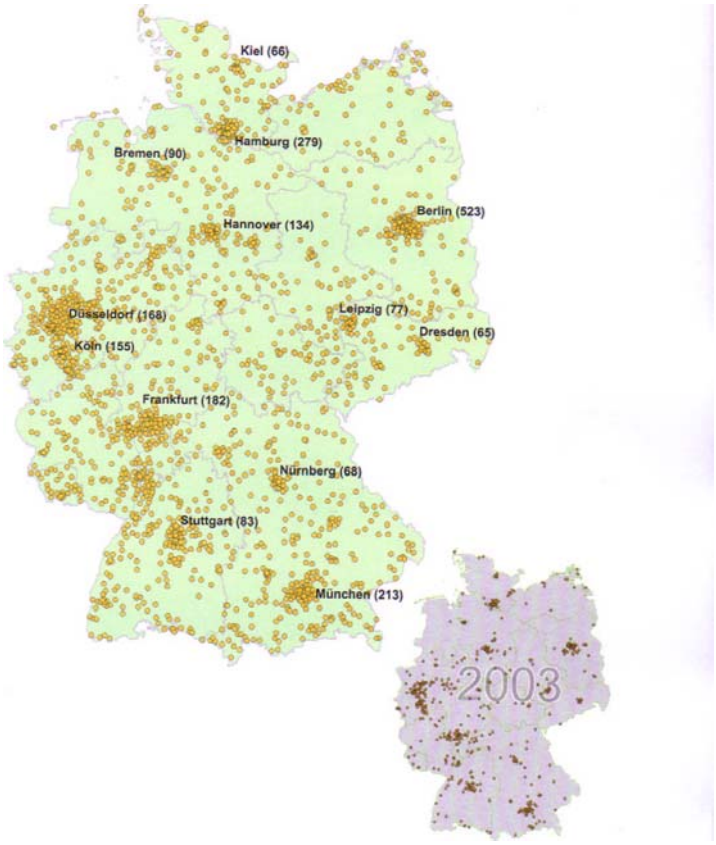
Vodafone, the second largest mobile carrier in Germany, offered 7 new UMTS cell phone models during the Christmas season 2004. In general, however, UMTS is still regarded as too expensive; not only for private but also for business use.

B. 3 W-Lan/WiMAX

W-Lan, by some regarded as a technology competing with UMTS, has spread fast and widely in Germany. According to the hotspot-database-carrier Portel, commercial providers ran about 6,000 public hotspots, at the end of 2004. The 10 biggest providers cover about 90% of the market (see chart 6).

WiMAX is on the brink of standardization, nevertheless, it is not expected to substitute UMTS within the next years. An area-wide extension of the WiMAX-network is not realized yet. Cost for equipment is comparable to UMTS. However, Intel plans to integrate WiMAX access devices - in addition to W-LAN - into the successor of the present Centrino-Technology.

Chart 6: Geographical distribution of commercial hotspots in Germany



Source: www.bundesnetzagentur.de

B.4 Bluetooth

Bluetooth, also allows users to access the internet via Bluetooth-access points. Moreover, cell phones, radios, hands-free sets and GPS can be coordinated via this technology.
In Mai 2005, the Bluetooth Special Interest Group announced, that 5 million Bluetooth-chips were sent out on a weekly basis. Currently, there are about 100 cell phones models and 80 headsets among the 600 available Bluetooth devices.

B.5 I-mode

I-mode is an open standard, based on iHTML and focuses mainly on "I-mode mail," a mail function connecting cell phones or cell phones with pc's, and content.
Technologically I-mode functions with UMTS and GPRS and it is, due to packet-switched data transmission permanently connected with the Internet, enabling pull/push services. In 2002, service provider E-Plus introduced I-mode to the German market. In September 2004, more than 1 million of the 9.065 E-Plus subscribers used this service. O2 plans to offer this service in the first half of 2006. However, I-mode is not expected to become as successful as in Japan, basically because many of the services that are available through I-mode in Japan, are available as a short message- or WAP-based service in Germany.

B.6 Cell phone tuning

Hardware suppliers as well as mobile carriers regard mobile data services as the main source of income for the future, with younger customers identified as main target group. Market leader in Germany for these "tuning" services is the company "Jamba," which supplies more than 50,000 products, such as background pictures, the latest ring tones from stars, games or video clips – for teenagers, cell phone tuning appears to be as important as clothing. Frost&Sullivan expects the cell phone games downloads to be in 2006 five times as high as in 2003; the market volume is estimated to increase up to EUR 6 billion.

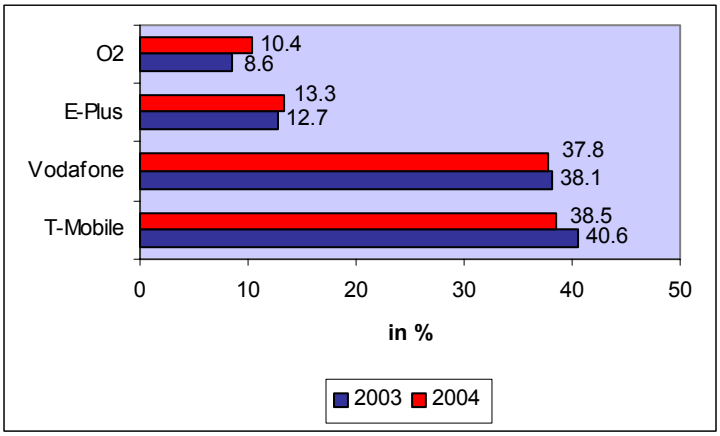
In 2003, about 90 million ring tones were downloaded. With an average price of EUR 1.99 per tone, mobile entertainment services providers earned about EUR 183 million. Next to contracts and short messages services, ring tones are the largest revenue source for service providers. Polyphone ring tones are outdated; real tones (real studio records) are the trend.

C. Competition

C.1 Mobile Carriers

Since the liberalization of the mobile communications market, four major players have been active in the German market: T-Mobile, Vodafone, E-Plus and O_2. Despite the fact, that T-Mobile lost 1.9% market share in 2004, the company is still market leader with 38.5%, followed closely by Vodafone with 37.8%. E-Plus and O_2 gained market share and reached 13.3% and 10.4% respectively.

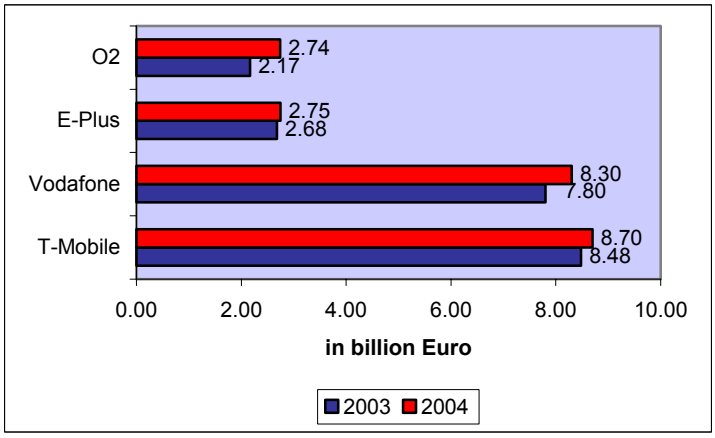
Chart 6: Market share of mobile carriers



Source: "Basiszahlen Telekommunikation", Motor-Presse Stuttgart

Sales of all carriers grew - between 2.59% (T-Mobile) and 26.26% (O_2) in 2004. Market leader T-Mobile achieved sales of EUR 8.7 billion, Vodafone EUR 8.3 billion, E-Plus EUR 2.75 billion and O_2 EUR 2.74 billion.

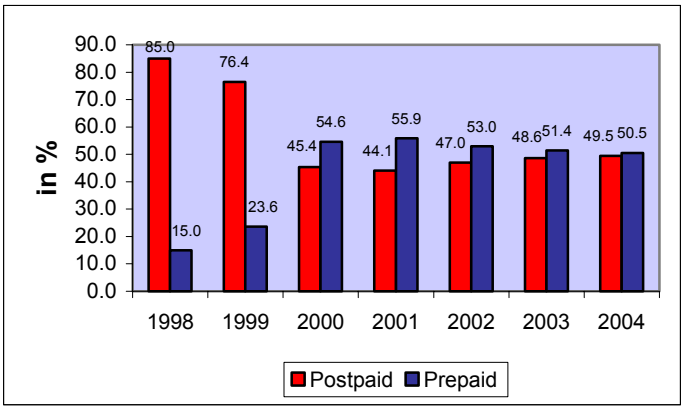
Chart 7: Mobile Communication Services – Sales 2004 vs. 2003



Source: www.faz.de, 07/07/2005

There is equal demand for pre- and postpaid contracts: In 2004, 49.5% had a postpaid- and 50.5% a prepaid contract. In general, there appears to be a trend to simplified pre-paid tariff models and away from giving away free cell phones as incentive fro signing contract.

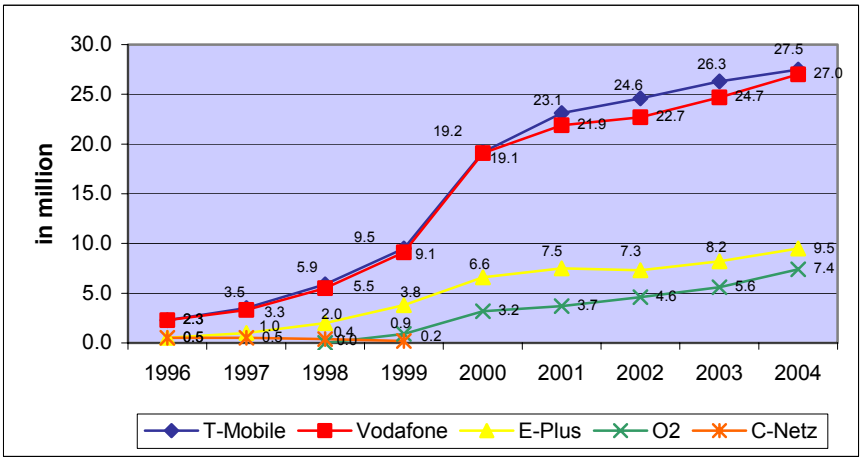
Chart 8: Development of pre- and postpaid contracts



Source: "Basiszahlen Telekommunikation", Motor-Presse Stuttgart

Vodafone, E-Plus and O_2 experienced considerable customer increases – in absolute and in percentage terms. Whereas the market leader T-Mobile gained only 113,000 new customers, Vodafone counted 840,000 and E-Plus 440,000 new subscribers. Even O_2, the smallest carrier, could achieve a plus of 729,000 customers.

Chart 9: Subscribers



Source: "Basiszahlen Telekommunikation", Motor-Presse Stuttgart

C.2 Other Service Providers

In addition to the four carriers above, which all operate their own physical networks, there are various other value-added service providers active in Germany. The most prominent are listed below:

Debitel
Debitel sells contracts for all four mobile carriers combined with own innovative products.

Mobilcom
Mobilcom focuses its marketing efforts on existing customers, established sales channels and the specialized trade

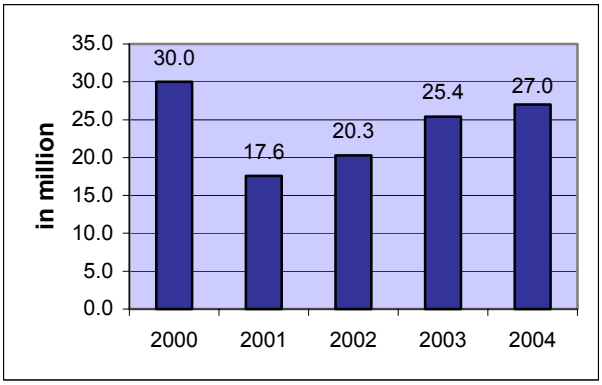
The Phone House
In a recent poll, 621 specialized dealers voted the Phone House as the best service provider in various categories: Most attractive packages and devices, quality of customer service hotline, best prices, rapidity of the payout as well as straightforwardness regarding rates. In the future, the company wants to gain 300 new trade partners.

C. 3 Hardware Suppliers –Terminal Equipment

All prominent global players are active in Germany. Worldwide, Sony Ericsson (+0.9 percent point), LG (+1.3%), Samsung (+1.9%) as well as Motorola (+0.9%) were able to increase their market share in 2004, whereas Siemens (- 1.2%) and the market leader Nokia (-4.1%) had to face losses.

Since 2001, cell phone sales in Germany have constantly been growing and reached 27 million units in 2004.

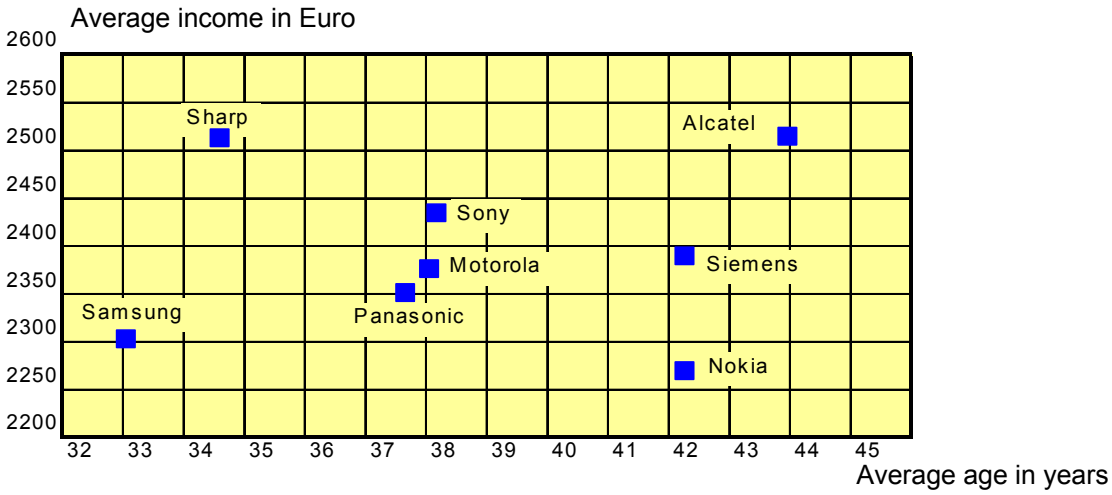
Chart 10: Cell phone sales in Germany



Source: "Basiszahlen Telekommunikation", Motor-Presse Stuttgart

Asian cell phone producers appeal mostly to the younger generation (average age: 33 years) with a lower income. Brands like Siemens, Nokia and Alcatel are the favorites underneath fellow citizens between 42 and older.

Chart 11: Popularity of cell phone brands according to age and income



Source: "Telecom Handel", Neue Mediengesellschaft Ulm mbH

D. Market Access

The Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway (http://www.bundesnetzagentur.de)is the German government regulating telecommunications.On July 13, 2005 the Regulatory Authority for Telecommunications and Posts which superseded the Federal Ministry of Posts and Telecommunications (BMPT) and the Federal Office for Posts and Telecommunications (BAPT), was renamed Federal Network Agency. It also acts as the root certification authority as provided for by the Electronic Signatures Act. The Federal Network Agency's decisions are based on the Telecommunications Act and can be challenged before court.

The Federal Network Agency is also responsible for technical regulation, i.e. it handles recognition of conformity assessment enitities, EMC issues and technical standards in general.

Service Licenses

Since July 25, 2003 license obligations have been eliminated. All licenses granted before that date are still valid according to §150 Abs. 4 TKG (Telecommunications Law). In the (unlikely) case that a mobile carrier plans to enter the market at this late stage and establish a new cellular network, this company would need to apply for available frequencies. The responsible government agency for frequency allotments is the Bundesnetzagentur. Presently, there are no free frequency bands for mobile telephony, the provision of further frequencies is, however, being considered.

Service providers selling services of the mobile carrier in their own name and on their own account do not need a license, but are obligated to register with the Bundesnetzagentur.

UMTS

UMTS frequencies (between 1920 and 2170 Mhz) were auctioned off in 2000, however, 2x10 MHz are still available as the company Mobilcom returned their license as the company's business model could not be realized.

The European Communication Committee (ECC) decided on March 18, 2005 to establish a European wide, harmonized frequency for UMTS. The required extension of the UMTS band (~2500 MHz) is planned in 2008.

Testing and Certification

Organizations responsible for testing and certification are, for example, Underwriters Laboratories or the "Technischer Überwachungsverein e.V. - TÜV" (Technical Inspection Association). TÜVs are private companies set up by various German states to inspect and test products for compliance with German safety standards. Individual TÜVs have also been authorized by the German Government to test products for compliance with EU legislation, and many have established representative offices in the United States. Within the DIN group of companies, certification services are offered by: DIN CERTCO (product and services certification), and DQS (management systems).

For the VDE (Association for Electrical, Electronic & Information Technologies) mark, which is applicable for electrical products only, companies can obtain information directly from the VDE (for contact information please see below).

The process for "VDE" certification is the same as that of the "GS" mark. Firms interested in certification should contact a U.S.-based test laboratory or a Conformity Assessment Body (see: http://ts.nist.gov/ts/htdocs/210/gsig/emc-cabs-mar02.pdf).

Self-Certification

For certain products, self-certification by manufacturers (through a Manufacturer's Declaration of Conformity) is sufficient. Further information is available from the contacts listed at the end of this chapter (see http://www.buyusa.gov/europeanunion).

E. Trade Promotion Opportunities

Trade Fairs
In Germany, trade fairs play a major role in product marketing. U.S. companies wishing to penetrate the German market often make their first approach at major trade fairs. For U.S. manufacturers and exporters wishing to sell in Germany (and in Europe) it is important to exhibit at one of Germany's major international fairs. Exhibiting at fairs can bring direct sales, but, more significantly, it can be one of the least expensive ways to test the market's receptivity for telecommunications products and services. Further, the strength and scope of the competition can be assessed and contacts with others "in the trade" can be established. From these contacts, U.S. companies can gather a great deal of valuable information about marketing in Germany and Europe.

The world's premier ICT show, "CeBIT," is held annually in Hannover, and maintains an office in the United States. Further information can be obtained from:

Deutsche Messe AG
Messegelaende
D-30521 Hannover
Germany
Tel: + 49 –511 89 0
Fax: + 49 –511 89 32 626
www.cebit.de

or

Hannover Fairs USA, Inc.
212 Carnegie Center
Princeton, NJ 08540
Tel: (609) 987 1202
Fax: (609) 987 8810
www.hfusa.com/cebit
www.cebit-events.com

Advertising
In Germany, trade publications are important promotion vehicles. Listed below are the leading trade publications for the German telecommunications industry, which are suitable for advertising. Detailed information and current advertising rates are available upon request from the publishers.

Funkschau
WEKA Fachzeitschriften-Verlag GMBH
Gruber Straße 46a
Postfach 1129
D-85586 Poing
Phone: +49 (8121) 95-0
Fax: +49 (8121) 95-1199
E-Mail: redaktion@funkschau.de
http://www.funkschau.de

Advertisement Agency abroad:
USA West:
Huson International Media
Jennifer Yomogida
1999 South Bascom Avenue
Suite 1000
Campell, CA95008
USA
Phone: +1 (408) 879-6666
Fax: +1 (408) 879-6669
E-Mail: Jennifer@husonusa.com

USA East:
Huson International Media
Rob Walker
350 Fith Avenue
Suite 2719
New York,NY 10118
USA
Phone: +1 (212) 268-3344 ext. 202
E-Mail: rob@husonusa.com

Connect
Motor Presse Stuttgart GmbH & Co. KG
Leuschnerstr. 1
D-70174 Stuttgart
Zentrale: Tel. 0711/182-01
http://www.connect.de

Telecom Handel
Neue Mediengesellschaft Ulm mbH
Konrad-Celtis-Straße 77
D-81369 München
Phone: +49 (89) 74117-0
Fax: +49 (89) 74117-153
E-Mail: redaction@telecom-handel.de
http://www.telecom-handel.de

Mobilfunk News
Fachverlag Sagkob
Obere Hauptstraße 9
D-85456 Wartenberg
Phone: +49 (8762) 726-700
Fax: +49 (8762) 726-710
E-Mail: info@fs-on.de
http://www.mobilfunk-news.de (website is under construction)

F. Sources

Relevant Websites:

German E-Commerce Association (www.eco.de)
Association for Electrical, Electronic and Informational Technologies (www.vde.de)
European Committee for Standardization (www.cenorm.de)
National Institute of Standards and Technology (www.nist.gov)
European Committee for Electrotechnical Standardization (www.cenelec.org)

- www.nokia.de
- www.nokia.com
- www.siemens.de
- www.motorola.com
- www.samsung.de
- www.ericsson.com
- www.t-mobile.de
- www.vodafone.de
- www.eplus.de
- www.genion.de
- www.debitel.de
- www.mobilcom.de
- www.thephonehouse.de
- www.cebit.de
- www.bitkom.de
- www.faz.de
- www.bundesnetzagentur.de
- www.dafu.de
- www.golem.de
- www.zdnet.de
- www.bmwa.bund.de
- www.heise.de

For more information on Telecommunication and how the Commercial Service can assist U.S. companies to develop their business in the German market, contact:

Mr. Volker Wirsdorf
Senior Commercial Specialist
U.S. Commercial Service
American Consulate General
Siesmayer Str. 21
60323 Frankfurt am Main
Tel: (49 69) 956-204-21
Fax: (49 69) 561-114
Email: Volker.Wirsdorf@mail.doc.gov
Website: http://www.buyusa.gov/germany/en/
www.export.gov/commercialservice

The U.S. Commercial Service Germany can be contacted via e-mail at: frankfurt.office.box@mail.doc.gov.You can locate your nearest U.S. Export Assistance Center, as well as Commercial Service offices overseas by visiting www.buyusa.gov.

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